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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,337	08/14/2001	Masaaki Nakabayashi	35.C15686	6686 9

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

VARGOT, MATHIEU D

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 10/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary

Application No.

09/928,337

Applicant(s)

NAKABAYASHI

Examiner

M. VARGOT

Group Art Unit

1732

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 10/18/01
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-15 is/are pending in the application.
- Of the above claim(s) 10-15 is/are withdrawn from consideration.
- ☒ Claim(s) 9 is/are allowed.
- ☒ Claim(s) 1-8 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☒ All ☐ Some* ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____.
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-9, drawn to a method of manufacturing an optical element, classified in class 264, subclass 1.7.
 - II. Claims 10-15, drawn to an optical element, system and device using such element, classified in class 359, subclass 455.

The inventions are distinct, each from the other because:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by other processes such as casting a photopolymerizable resin in a mold to make the diffractive element and submerging the mold and element thereon into a cryogenic fluid to release the diffractive lens element from the mold.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Okun on July 10, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-15 have been

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withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

2. Claims 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In these claims, the recitation of "intervening member" is indefinite in that it is not clear exactly where the intervening member is with respect to the molded material lens. For instance, claim 2 recites that the substrate is put on the molding material. Presumably, the intervening member must be placed over the substrate, although such is not really clear from the claim and should be clarified.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 6-8 are rejected under 35 U.S.C. 102(b) as anticipated by Japanese

document 1-152,015.

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Japanese -015 discloses making an optical element by molding resin in a Fresnel lens mold and applying liquid nitrogen to the surface of the molded lens which is opposite to the molded prism transfer surface so that the top surface shrinks and allows the bottom, prism molded surface to pull away from the mold to facilitate release of the molded lens. There are shown a plurality of cryogenic fluid nozzles (see 7 in Figs. 1 and 2) which are arranged at the periphery of the lens and which move toward the center portion of the lens as recited in instant claim 8. While the abstract teaches that the outer periphery of the lens is shrunk by the sudden quenching of the outer surface, it is submitted inherent that this quenching in fact causes a local temperature difference at the interface of the mold and the molding material which acts to separate the mold from the lens element. In other words, while the shrinkage of the element at the top indeed forces the lower prism molded portion of the lens away from the mold, clearly a local temperature difference must be generated at the interface since Japanese -015 is performing the same steps as the instant. The abstract does teach that the lower surface adhered to the mold retains the mold temperature. However, it is submitted that this does not obviate the rejection. As the liquid nitrogen is applied to the top surface of the lens, the bottom (ie, prism molded) surface of the lens must inherently be getting colder than the mold due to heat transfer considerations and hence a temperature difference at the lens/mold interface must be generated during the separation of the lens and the mold.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese

document 1-152,015 in view of Japanese document 64-7001.

Japanese -015 discloses the basic claimed process as set forth in paragraph 2, supra, the reference failing to teach applying a substrate to the molding material prior to the release and the use of intervening members which limit the heat transfer. Japanese -001 discloses applying a substrate over a material to be molded into a Fresnel lens and such is submitted to have been an obvious modification to the process of the primary reference dependent on the final use for the Fresnel lens--ie, if used as a projection screen, the lens would need a substrate. Concerning the use of an intervening member as set forth in instant claims 3-5, it is submitted that such constitutes no more than an insulating blanket which would be used to limit the heat transfer to the substrate and molded lens. It is further submitted that such insulators are well known in the art and would have been obvious addendums to the process of the primary reference when desiring to limit the rate of heat transfer to the lens given a coolant source whose temperature would be unalterable, such as the cryogenic source shown in Japanese -015.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Vargot whose telephone number is 703 308-2621.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

M. Vargot

September 23, 2003

M. Vargot
MATHIEU D. VARGOT
PRIMARY EXAMINER
GROUP 1300

9/23/03